



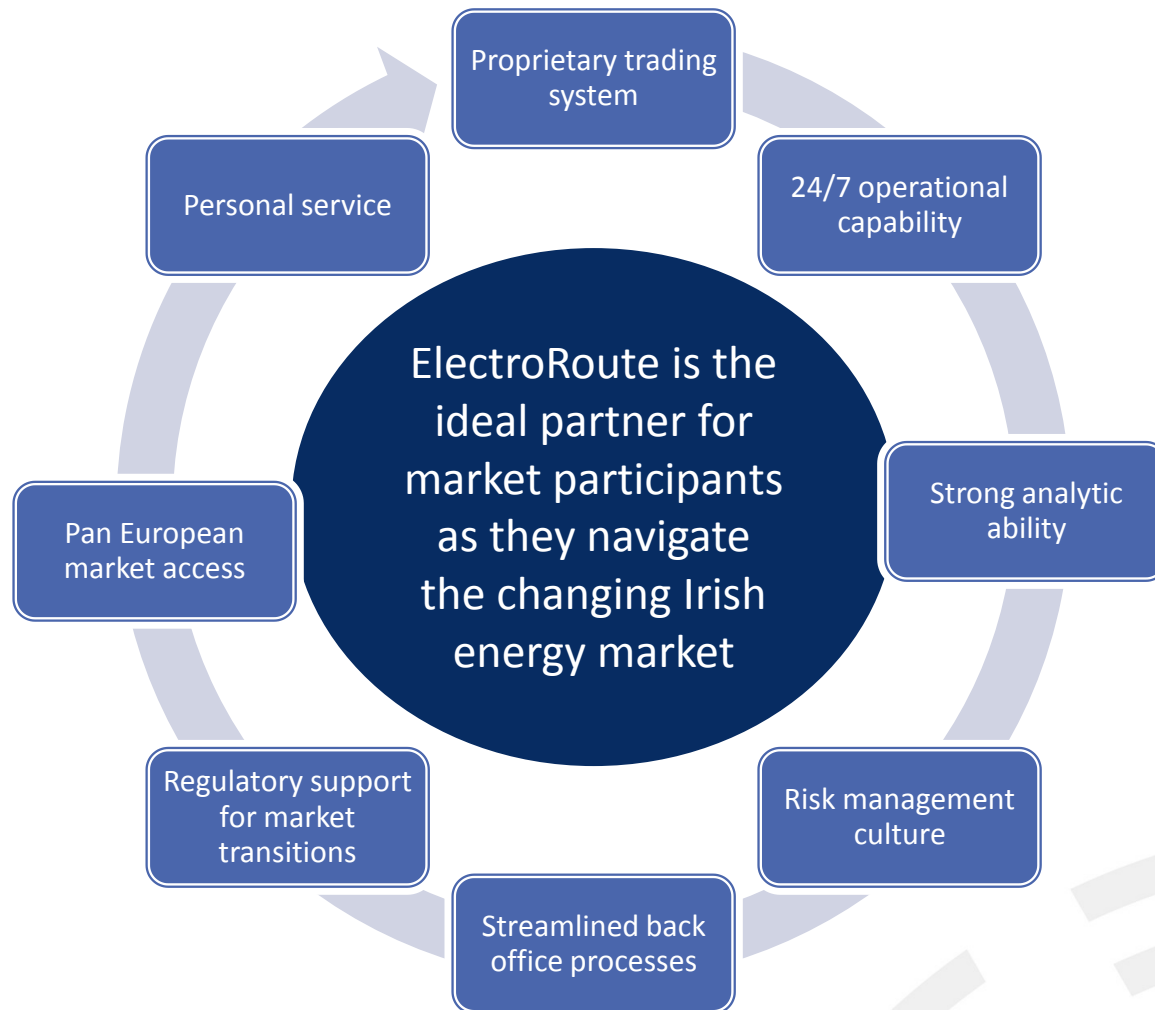
ElectroRoute is a dynamic energy trading and services company



ElectroRoute
Empowering Your Energy Independence



ElectroRoute – a *trusted partner*



Markets and Platforms



Physical Nominations

- ▶ We believe PN's should be delinked from contract volumes
 - There will naturally be a gap anyways
 - Very hard to make a PN firm with your DA auction contract as PN will adjust in ID market
 - More liquidity by participants and asset less traders
 - Price convergence between market timeframes
 - Less volatility
 - Better liquidity
 - Better reference pricing

Intraday

- ▶ Liquidity, liquidity, liquidity
- ▶ Intraday volumes caused by
 - Forced outages
 - Wind forecast error
 - X-Border ID flows
- ▶ In GB today ID market is ~200MW deep, system circa 10x SEM so ID market in I-SEM perhaps 50-100MW deep ?
- ▶ Liquidity focusing and asset less trading may solve

Balancing - Tagging and Flagging

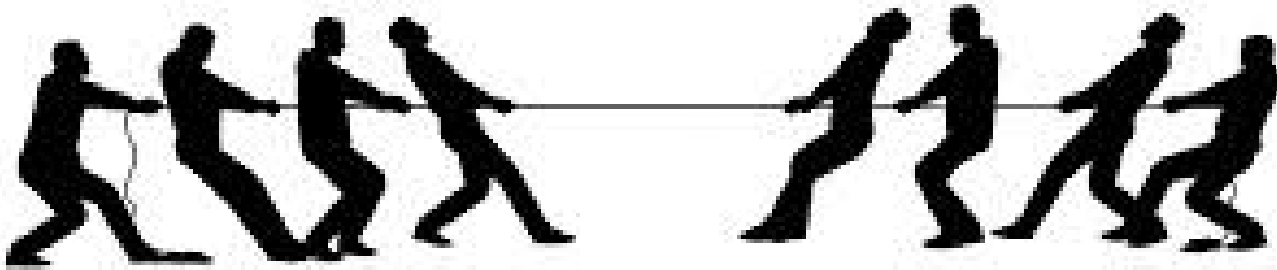
Action	GB process
Maintaining reserve headroom	
Frequency response and regulation	
Intra-period balancing	✓
Maintaining SNSP limit	
Positioning for inertia, ramping	
Transmission constraints (thermal, voltage, transients)	✓
DSO constraints	
Emergency instructions	✓
Priority dispatch	
Maintaining I/C transfer capacity	
SO-SO actions and countertrading	✓
Wind curtailment	
Testing	
Load response	
Automated governor response*	

- ▶ Potentially large volume of non-energy actions more than 28% seen in GB
- ▶ Balancing market may be too thin with our scale of tagged bids/offers removed

Balancing Market Overlap

- ▶ Overlap of intra-day market and balancing market may cause inefficiencies and disempower the TSO in balancing the system

Participants



Possible alternative

- ▶ Resolve non-energy balancing actions before the balancing market
 - Make the DA process solve the non-energy constraints
- ▶ Can the main system constraints be implemented in EUPHEMIA ?
 - Reserve
 - SNSP
 - Wind curtailment
- ▶ If yes then DA schedule much more feasible
 - Enables removal of overlap of ID and Balancing market
 - Reduced volume balancing actions now feasible after ID gate closure

Loss-Adjusted Net Demand

- ▶ Options for I-SEM
 - Cost of the NDLF allocated to suppliers as currently
 - Volume of NDLF allocated to suppliers
 - Volume of NDLF offered to participants in open market competition
 - Similar to ERDF approach in France where to offset network losses the DSO regularly purchases energy from qualified participants through open market competition

Metering

- ▶ Should aggressive timings be maintained in I-SEM
 - YES
- ▶ We don't care about imbalance now
- ▶ This will change in I-SEM
 - Imbalance volumes will be a key feature and KPI for all participants
- ▶ Benefits of knowing your imbalance volumes early
 - Fast feedback on trading performance allows participants to adjust to market conditions, trading or systems issues
 - Imbalance settlement is quicker
 - Faster settlement needs less collateral

Concluding Remarks

- ▶ I-SEM components appear difficult only because they are different
- ▶ Process open and engaging so far - thank you
- ▶ Fantastic opportunity to get it right
 - International trade of power import and export
 - Empowerment for generators and suppliers
 - Reference and future prices for investment
 - Hedging for suppliers and generators
 - Enabling the market for efficient trade
 - Increased efficiency = better for consumers



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